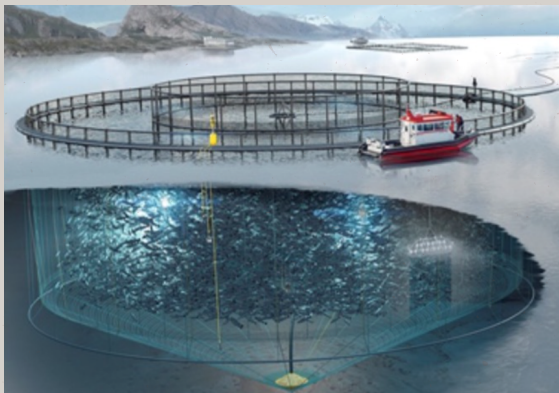


# How to avoid the use of chemicals to control parasites in salmon farming?

## ABSTRACT

The development of salmon farming in the world has been accompanied by a number of conditions like parasitism by Sea Lice (*Caligus rogercresceyi*), this problem occurs in the fattening stage of Atlantic Salmon (*Salmo salar*) in the sea, increasing mortality and generating economic losses. The salmon industry efforts have focused on resolving the Sea Lice parasitism (*C. rogercresceyi*) through the use of antibiotics to control the infestation and the use of vaccines to prevent it, but it presents biological implications for salmon, the marine environment and human health.



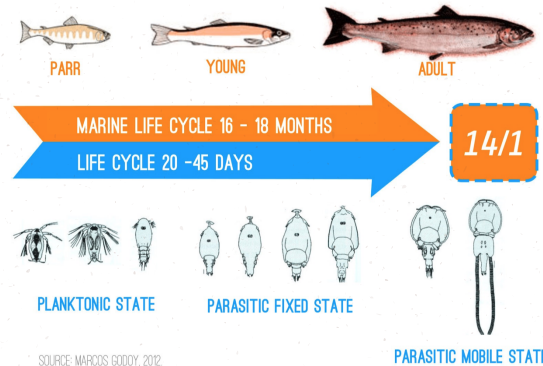
## LITERATURE REVIEW

CHEMICALS

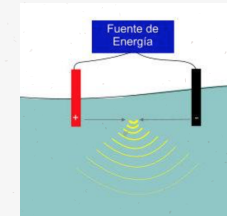
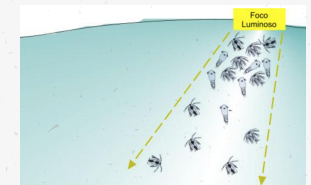
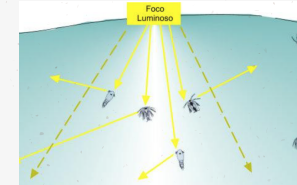
BATHS  
INJECTIONS  
FOOD

Environmental Pollution  
Death of other species  
Create barriers to export  
Damage animal health  
Damage human health  
Changes marine ecosystem  
Etc.

### SALMON - SEA LICE LIFE CYCLE



## METHODOLOGY



The methodologies used were laboratory analyses that simulated real conditions and tests in the marine environment, in which the way to attract the parasites and eliminate them was sought. The result was that they are attracted by bluish lights and can be eliminated with electrical pulses, since seawater is a natural conductor.

## CONCLUSION

- 1.- It is possible to control parasites avoiding the use of chemicals in salmon farms.
- 2.- By means of the findings of this research, an electronic system for the elimination of parasites in marine cultures is proposed.
- 3.- The proposed system can be used in a preventive way, thus avoiding physical damage to the fish and maintaining its commercial value, besides it does not represent an environmental damage, since the dead parasites are transformed into food for other species.
- 4.- A system of light barriers located outside the culture cages is proposed, which will prevent the entry of parasites into the culture cages.

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